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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/618,043

07/11/2003

Steve Serati

040131-000100US

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09/30/2004

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EXAMINER

DINH, JACK

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/618,043

Applicant(s)

SERATI ET AL.

Examiner

Jack Dinh

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 and 34-42 is/are allowed.
- 6) ☒ Claim(s) 14-17, 31-33, 43, 44, 48, 50-52 and 56 is/are rejected.
- 7) ☒ Claim(s) 18-30, 45-47, 49 and 53-55 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1103.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: DETAILED ACTION.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 17 is objected to because of the following informalities. The phrase “f/#” should be replace with “focal ratio” as described in the specification, to further clarify the subject matter being claimed. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 44 and 52, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 44 and 52, the term “progressively” renders the claims indefinite. It is unclear of the focusing degree being claimed. For examination purpose, the rejection below is based on the omission of this term.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 14-16, 43, 44, 48, 51 and 52 are rejected under 35 U.S.C. 102(a) as being unpatentable by Lambert (US Patent 6,624,919).

Regarding claims 14 and 51, Lambert (figure 1) is interpreted as disclosing a device comprising a focusing element 12 disposed to focus the electromagnetic beam onto a first spot position 14, an optical train 10 configured to translate the first spot position spatially to a second spot position 15 nonmechanically by routing the electromagnetic beam through the optical train, and a collimation element 13 disposed to collimate the electromagnetic beam emanating from the second spot position.

Regarding claims 15 and 16, Lambert is interpreted as further disclosing that the focusing element comprises a lens 12, and the collimation element comprises a lens 13 (col. 9, lines 57-63).

Regarding claim 43, the method is apparently inherited from the device of claim 14.

Regarding claims 44 and 52, Lambert (figure 4D) is interpreted as further disclosing that routing the electromagnetic beam through the optical train comprises focusing the electromagnetic beam onto spatially displaced intermediate spot positions.

Regarding claim 48, Lambert is interpreted as further disclosing that the second spot position is displaced in two dimensions from the first spot position within a plane orthogonal to an initial direction of the electromagnetic beam (see figure 1).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17, 31-33, 50 and 56, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambert (US Patent 6,624,919), as applied in claims 14, 16, 43 and 51

Regarding claim 17, Lambert is interpreted as disclosing all the claimed limitations, as described above, except that the focal ratio of the collimation lens is less than two. However, such focal lens would be widely available, and the range of the focal ratio would be well within that can be found through simple experimentation. It is considered not inventive to discover the optimum range by routine experimentation. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a focal ratio of the collimation lens is less than two, for design choice purposes.

Regarding claims 31, 32, 50 and 56, Lambert is interpreted as disclosing all the claimed limitations, as described above, except for a supplementary beam-steering assembly configured

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prior to the electromagnetic beam encountering the focusing element, to steer the electromagnetic beam by a supplementary beamsteering angle that is smaller than at least beam steering angular discrimination provided by the combination of the focusing element, optical train, and collimation element. However, as its name implies, "supplementary" beam steering assembly can be disposed in any desired position along the beam path to steer the beam at any desired supplementary angle, had such assembly is needed. In addition, the Applicant has not disclosed any unexpected result this assembly would have over those of the prior art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a supplementary beam steering assembly, for the purpose of adding additional steering angle to the beam.

Regarding claim 33, Lambert is interpreted as disclosing all the claimed limitations, as described above, except for providing a plurality of each of the described components.

However, it is difficult to conceive of a more obvious method of steering multiple beams than providing a plurality of each of the essential components to steer each respective beam.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of focusing elements, optical trains and collimation elements, for the purpose of steering multiple beams.

***Allowable Subject Matter***

5. Claims 1-13 and 34-42 allowed. Claims 18-30, 45-47, 49 and 53-55 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 1 and 34, the prior art fails to disclose the device comprising a reflective element, a polarizer, a relay focusing element, and a modulation element, and its unique configuration as a whole.

Regarding claim 18, the prior art fails to disclose that the optical train comprises a plurality of reflective elements and a relay focusing element.

Regarding claims 45, 47, 53 and 55, the prior art fails to disclose that routing the electromagnetic beam through the optical train further comprises reflecting the electromagnetic beam from each of the intermediate spot positions to a subsequent spot position.

Regarding claims 46 and 54, the prior art fails to disclose that the method further comprising selectively transforming a polarization of the electromagnetic beam to include a component of a specified polarization at a spatially localized position, and emanating the component of the specified polarization from the second spot position.

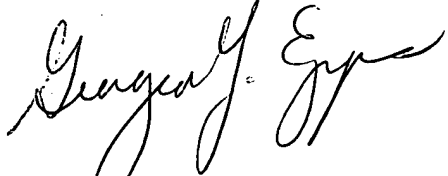
***Other Information/Remarks***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack Dinh whose telephone number is 571-272-2327. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jack Dinh

  
Georgia Epps  
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